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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/834,637	04/16/2001	Robert P. Haas	SAIC0041	3674

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WASHINGTON, DC 20005

EXAMINER

HWANG, JOON H

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 01/13/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/834,637

Applicant(s)

HAAS ET AL.

Examiner

Joon H. Hwang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 28-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: _____

DETAILED ACTION

1. The applicants elected the Group I (claims 1-27) in the response to the restriction requirement without traverse in the amendment received on 10/21/03.

The pending claims are 1-27.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

"linear (attribute) data" in the preamble of claims 1 and 7 is not clear whether it is "linear attribute data" or "linear data".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamsa (U.S. Patent No. 6,564,201) in view of Nomura (U.S. Patent No. 6,421,659).

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With respect to claim 1, Hamsa discloses a computing device having a user interface and a relational database connected to the computing device and accessible by structured query language, the database comprising spatial and attributes data related to geographic information (fig. 2, lines 38-56 in col. 1, line 66 in col. 3 thru line 12 in col. 4, lines 16-26 in col. 6, line 48 in col. 5 thru line 5 in col. 6, and section 3.3 on col. 23 and col. 24). Hamsa discloses changing records in a database (lines 32-39 in col. 6). Hamsa is silent on a dynamic segmentation of anchor sections. However, Nomura discloses a map database and providing dynamic segmentation of permanent anchor sections (a road intersection) defining a spatial reference for a geographic element in a database (figs. 3-7, fig. 11, lines 40-55 in col. 1, lines 16-42 in col. 3, line 49 in col. 3 thru line 3 in col. 4, and line 27 in col. 4 thru line 64 in col. 5). Therefore, based on Hamsa in view of Nomura, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize dynamic segmentation of anchor sections of Nomura to the database of Hamsa in order to update and change records in the database of Hamsa for a new road intersection.

With respect to claim 2, Hamsa discloses accessing the relational database via an object-oriented front-end (fig. 2 and line 53 in col. 4 thru 32 in col. 5).

With respect to claim 4, Hamsa disclose the relational database is also accessible by a graphical information system viewing application (fig. 2 and line 66 in col. 6 thru line 10 in col. 7).

6. Claims 3, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamsa (U.S. Patent No. 6,564,201) in view of Nomura (U.S. Patent No. 6,421,659), and further in view of Muro et al. (U.S. Patent No. 6,505,186).

With respect to claim 3, Hamsa and Nomura disclose the claimed subject matter as discussed above except maintaining historical records. However, Muro discloses integrated temporal data for maintaining historical records (fig. 1, fig. 2, and line 60 in col. 1 thru line 10 in col. 3) for tracking of information and utilization of the past.

Therefore, based on Hamsa in view of Nomura, and further in view of Muro, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize maintaining historical records of Muro to the database system of Hamsa in order to track information changes and utilize the data of the past.

With respect to claim 5, Hamsa and Nomura disclose the claimed subject matter as discussed above except making the multiple databases of road network data consistent with one another. However, Muro discloses a backup of a database and maintenance of databases (fig. 1, fig. 2, lines 1-57 in col. 1, and lines 3-32 in col. 4). Therefore, based on Hamsa in view of Nomura, and further in view of Muro, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hamsa with the teaching of Muro for the database backup and maintenance.

With respect to claim 6, Hamsa and Nomura disclose the claimed subject matter as discussed above except a database in a distributed data environment. However, Muro discloses a database, in a distributed data environment, accessible via a plurality

of servers (fig. 1, fig. 2, lines 1-57 in col. 1, and lines 3-32 in col. 4), which teaches an additional computing device can be connected to the database. Therefore, based on Hamsa in view of Nomura, and further in view of Muro, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a database in a distributed data environment of Muro to the system of Hamsa in order to allow a user to gain access to the database via a plurality of servers.

Allowable Subject Matter

7. Claims 7-27 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claim 7 identifies the distinct feature, providing permanent anchor sections representing physical selections of a roadway, an anchor section defining a spatial reference in road data, the anchor sections also integrated with linear data to form a road network; associating attributes and linear events with positions in the road network; storing linear event data related to anchor sections in a relational table; storing road attribute data by associating each attribute with locations specified in terms of a linear referencing method (LRM); implementing a dynamic segmentation function for conducting dynamic segmentation on a selective basis; maintaining historical data related to anchor sections and linear event data; enabling the creation of an interior intersection within the road data, where an interior intersection to an anchor section is defined by offsets from an end of the anchor section; synchronizing spatial and linear data, for tying spatial data to a physical location represented by the road network; and

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utilizing meta-data definitions for database elements in a data dictionary, the data dictionary defining an implementation of the relational database, resulting in an extensible relational database model. The closest prior art, Hamsa (U.S. Patent No. 6,564,201) disclosing a map database, fails to suggest the claimed limitation as mentioned above in combination with other claimed elements.


Claims 8-27, further depending from the claim 7, are objected with the same reason above.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joon H. Hwang whose telephone number is 703-305-6469. The examiner can normally be reached on 9:30-6:00(M~F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Joon Hwang
1/8/03



JEAN M. CORRIELUS
PRIMARY EXAMINER